

ABSTRACT OF DISCLOSURE

An apparatus and method to modulate address data of a disc type recording medium, include generating the address data, performing error correction coding of the address data and outputting coded address data, receiving the coded address data in a unit of at least two bits, generating a first modulated signal of the coded address data using a first modulation technique, generating a second modulated signal of the coded address data using a second modulating signal, and generating a unit wobble signal by synthesizing the first and second modulated signals.